

REMARKS

The Official Action notes the election of the species of Figure 7 and then indicates that Claim 7-17 are withdrawn from further consideration as being drawn to a nonelected species since there is no allowable generic or linking claim. Although Claims 1-4 have not yet been allowed, Claims 1-4 are generic to both the elected species of Figure 7 and the nonelected species of Figure 2, as was indicated in the Response to the Restriction Requirement dated October 16, 2007.

The Official Action initially objects to the drawings for failing to disclose the “elongate members” of Claim 6 and 24 with respect to the species of Figure 7. Claims 6 and 24 have now been canceled, thereby mooting this objection to the drawings.

As to the substantive rejections, the Official Action rejects Claims 1, 2, 4, 18-20 and 22 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 2,812,165 to William E. Hammond. The Official Action also rejects Claims 3 and 21 under 35 U.S.C. § 103(a) as being unpatentable over the Hammond ‘165 patent in view of U.S. Patent No. 6,935,416 to Tadashi Tsunoda, et al. Further, the Official Action rejects Claims 5 and 23 under 35 U.S.C. § 103(a) as being unpatentable over the Hammond ‘165 patent in view of U.S. Patent No. 3,111,982 to Kurt Ulbricht. Finally, the Official Action rejects Claims 6 and 24 under 35 U.S.C. § 103(a) as being unpatentable over the Hammond ‘165 patent in view of U.S. Patent No. 6,289,977 to Michel Claudel, et al. As Claims 6 and 24 have been canceled, the rejection thereof as being obvious over the Hammond ‘165 patent and the Claudel ‘977 patent is also moot. As to the remainder of the rejections, it is noted that independent Claims 1 and 18 have been amended in order to further patentably distinguish the cited references, taken either individually or in combination. Based upon the foregoing amendments and the following remarks, reconsideration of the present application and allowance of the amended set of claims are respectfully requested.

Independent Claims 1 and 18 are directed to an apparatus for exchanging heat between first and second fluids. The apparatus includes a plurality of flow divider sheets positioned in a stacked configuration and extending in a longitudinal direction such that adjacent pairs of the sheets define flow passages therebetween for receiving the first and second fluids. Each sheet is nonuniform in the longitudinal direction and defines a manifold portion (or rather first and second manifold portions in the context of the Claim 18) and a corrugated portion. As such, the

corrugated portions of each adjacent pair of sheets define a plurality of fluid channels extending generally in the longitudinal direction. First and second pluralities of the flow passages are configured to receive a respective one of the first and second fluids. Moreover, each flow passage is structured to receive the respective fluid in the fluid channels such that thermal energy is transferred between the fluids flowing between the corrugated portions of the flow divider sheets.

As now amended, independent Claims 1 and 18 further define the apparatus to include “members for joining transverse edges of adjacent flow divider sheets with the corrugated portions of the adjacent flow divider sheets being otherwise disconnected throughout the corrugated portions of the flow passages such that the adjacent sheets are adjustable during operation of the apparatus.” As such, the apparatus of amended independent Claims 1 and 18 can accommodate nonuniform expansion and contraction of adjacent flow divider sheets during heating and cooling.

In conjunction with the rejection of dependent Claims 5 and 23 which previously recited that the corrugated portions of adjacent flow divider sheets are substantially disconnected, the Official Action noted that the Hammond ‘165 patent lacked disconnected corrugated portions. However, the Official Action cited the Ulbricht ‘982 patent for its alleged disclosure of disconnected flow divider sheets citing, in particular, column 2, line 58-column 3, line 4 of the Ulbricht ‘982 patent. In regards to the relationship of adjacent flow divider sheets, column 2, line 58-column 3, line 4 of the Ulbricht ‘982 patent states as follows:

The corrugated sections or portions 2a of the two plates which face each other, or abut, can be secured together by butt welding, or the like.

This is done only to stiffen or rigidify the two plates and to hold them together, since it is not absolutely necessary to separate the channels within each medium where they are traversed by the same medium. As a result, the securement of the two plates in each element can be limited to specific points thereof.

Thus, although the Ulbricht ‘982 patent primarily discloses the securement of adjacent plates by butt welding, the Ulbricht ‘982 patent does disclose that two adjacent plates that form each element, i.e., each corrugation, must be joined at least at specific points. In contrast, the corrugated portions of the adjacent flow divider sheets of amended independent Claims 1 and 18

are disconnected from one another, thereby permitting movement therebetween to accommodate expansion or contraction during heating and cooling. In contrast, even in the instance in which the corrugated sections of the Ulbricht '982 patent are not butt welded to one another, the corrugations are at least secured to one another at a number of specific points and are not disconnected from one another, as now set forth by amended Claims 1 and 18.

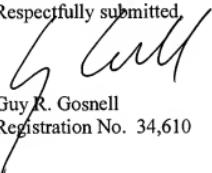
Additionally, none of the other cited references, that is, neither the Tsunoda '416 patent nor the Claudel '977 patent, teach or suggest "members for joining transverse edges of adjacent flow divider sheets with the corrugated portions of the adjacent flow divider sheets being otherwise disconnected throughout the corrugated portions of the flow passages," as now recited by amended independent Claims 1 and 18. Indeed, neither of the other cited references were cited for this proposition and, instead, were cited for other purposes. Since none of the cited references teach or suggest the disconnection of the corrugated portions of the adjacent flow divider sheets as set forth by amended independent Claims 1 and 18, it necessarily follows that no combination of the cited references teaches or suggests at least this same recitation. For each of the foregoing reasons, it is therefore respectfully submitted that independent Claims 1 and 18, as amended, as well as the claims which depend therefrom, are not taught or suggested by the cited references, taken either individually or in combination, thereby overcoming the rejection to the claims under 35 U.S.C. §§ 102(b) and 103(a).

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CONCLUSION

In view of the amendments and the remarks presented above, it is respectfully submitted that all of the present claims of the present application are in condition for immediate allowance. It is therefore respectfully requested that a Notice of Allowance be issued. The Examiner is encouraged to contact Applicants' undersigned attorney to resolve any remaining issues in order to expedite examination of the present application.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

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